chemokine therapeutics

annual report 2006

Chemokines for Life

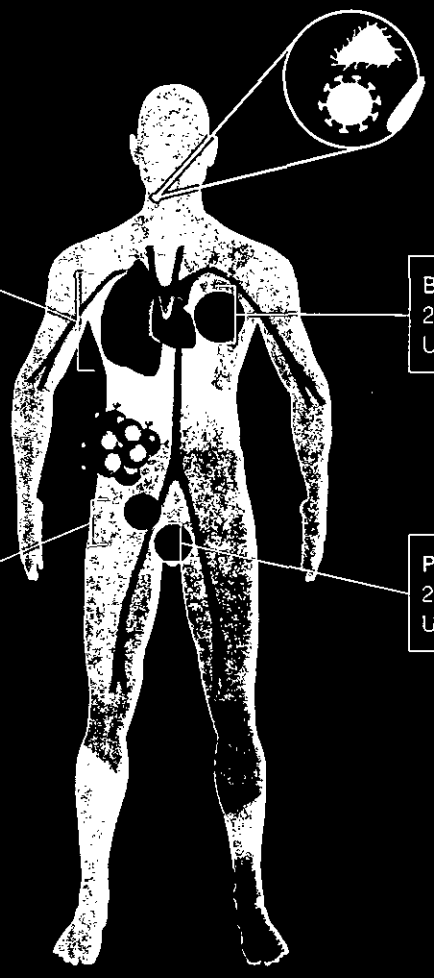
Chemokines are a class of naturally occurring proteins critical to immune response function. Responsible for blood cell formation through stem cell growth and differentiation, their main role is to guide the movement of cells within the human body. Chemokines are crucial to cell regulation, one of the most basic elements of life.

Chemokine Therapeutics is a pioneering biotechnology company that has developed synthetic versions of chemokines with the potential application to address significant unmet medical needs.

What are Chemokines?

Secreted by the body's immune cells, chemokines are present in organs like the lymph nodes, liver and lungs. They are also found in bone marrow. Chemokines are recognized for their ability to induce the movement of cells and bacteria within the body. While some chemokines mobilize white blood cells to the site of an infection to help repair damage to tissue and organs, others control the migration of cells during the normal process of tissue maintenance, growth and development.

Potential Markets



Lung
172,000 new
U.S. cases/year

Breast
214,000 new
U.S. cases/year

Ovarian
20,0c new U.S.
cases/year

Prostate
234,000 new
U.S. cases/year

About one in two men and one in three women will develop cancer in their lifetime.

Figures obtained from American Cancer Society

Why Chemokines?

With more than 50 chemokines discovered since the 1990s, this class of proteins has been found to play an important function in the physiological processes in a number of prominent diseases. Because chemokines are critical to cell regulation, there is an increasing focus on their role in cancer progression, particularly blood vessel generation and metastasis (the spread of uncontrolled cancer). Chemokines are also being studied for their potential ability to fight viral infections like HIV and other autoimmune diseases.

Chemokines bind to specific receptors on the surface of certain target cells, such as white blood cells. Because several different chemokines can interact with one specific receptor and other chemokines are capable of interacting with multiple receptors, the challenge is to identify which chemokines and their respective receptors should be targeted.

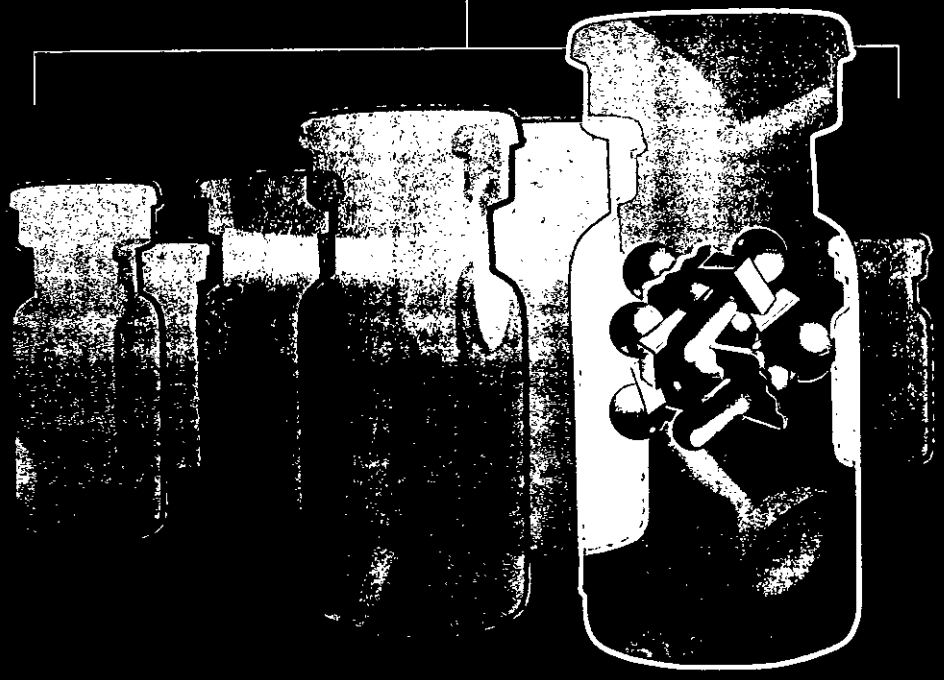
Our Proprietary Drug Discovery Approach

Chemokine Therapeutics has an approach to address this challenge.

Through leveraging information about the role of chemokines, their linear amino-acid sequence, three-dimensional structure, genetic sequence and binding sites, we are able to systematically screen promising chemokines using receptor binding studies. Analogs with the desired biological and chemical properties to treat disease have the ability to mimic or inhibit a chemokine's natural response and its normal system of operation for a desired therapeutic effect.

Product Candidates

We have designed several hundred analogs; five compounds have been selected as potential drug candidates. Two of them, CTCE-9908 and CTCE-0214, are our lead product candidates. Each has shown to be safe in Phase I clinical trials.



CTCE-9908

CTCE-9908 has the potential to address the metastatic process in cancer, whereby cells spread from the original primary tumor site to another area of the body. It is the metastatic process that accounts for 90% of all cancer-related deaths. While many cancer drugs are approved for metastatic advanced disease, there are no drugs specifically approved having metastasis as the primary target. Thus, we believe CTCE-9908's unique properties could address a significant unmet medical need.

Why we are excited

Data shows that not only was CTCE-9908 safe and well-tolerated in preclinical and Phase I studies, it was able to interfere with the steps involved in the spread of cancer in preclinical studies.

This compound was further validated in a Phase I/II trial involving late-stage cancer patients. Preliminary data showed no significant dose-limiting toxicities with some evidence of stabilization of disease and a biomarker response to CTCE-9908. As such, we believe that CTCE-9908 has strong potential to become part of a new generation of drugs that act to inhibit the metastasis of cancer cells or interfere with the metastatic process.

Future

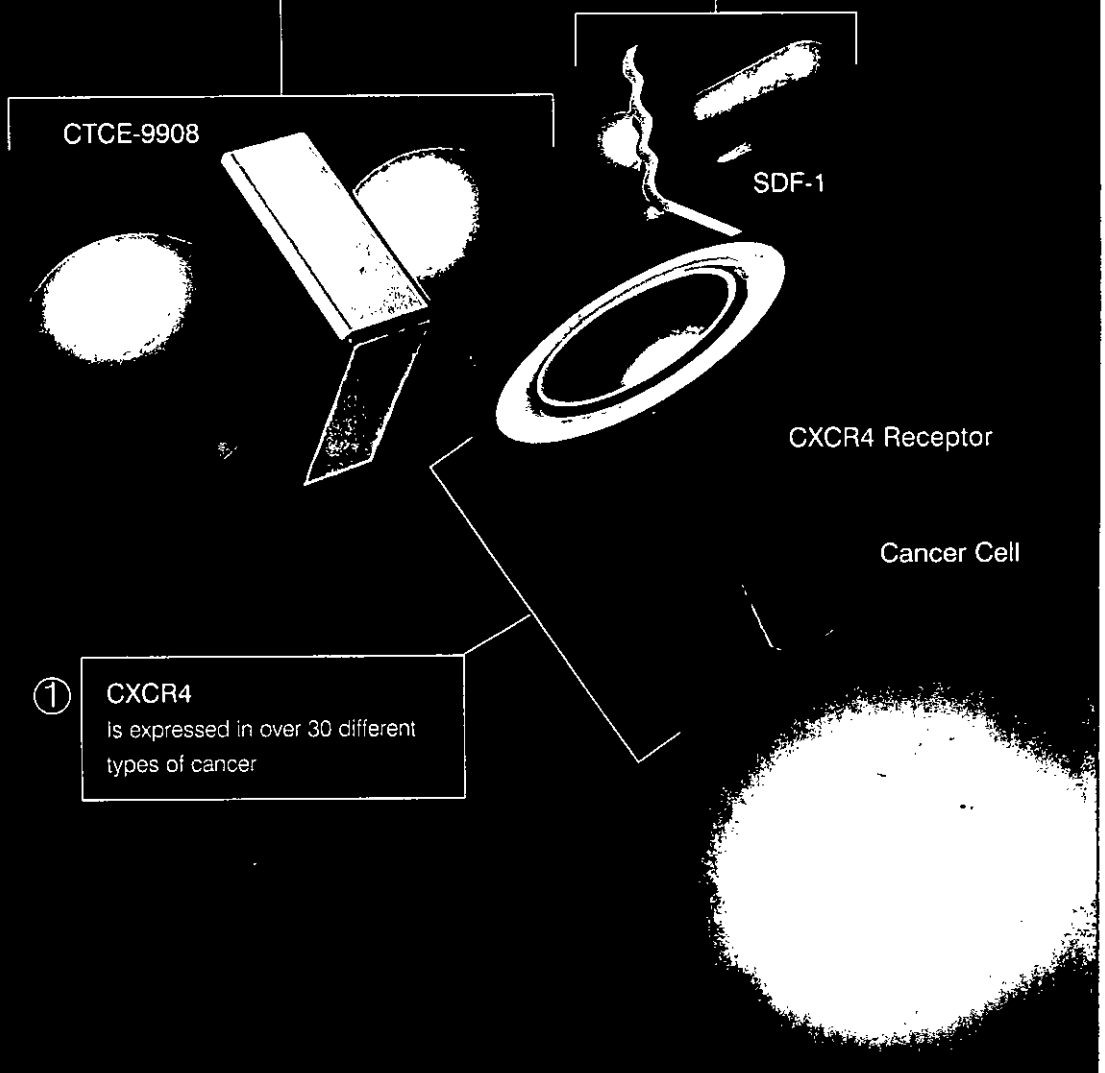
We are developing CTCE-9908 to target specific types of metastatic cancer that express the CXCR4 receptor, including ovarian, prostate and breast cancers. These cancers represent a market with an unmet medical need for effective, life-lengthening therapies. Furthermore, because both prostate and ovarian cancers have well-established tumor markers, potential disease response to therapy can be more easily measured.

Final data from our Phase I/II trial is expected to be released in 2007.

CTCE-9908 Blocks Cancer Signals

② **SDF-1**
The only known natural chemokine that binds to CXCR4 critical for the spread of cancer

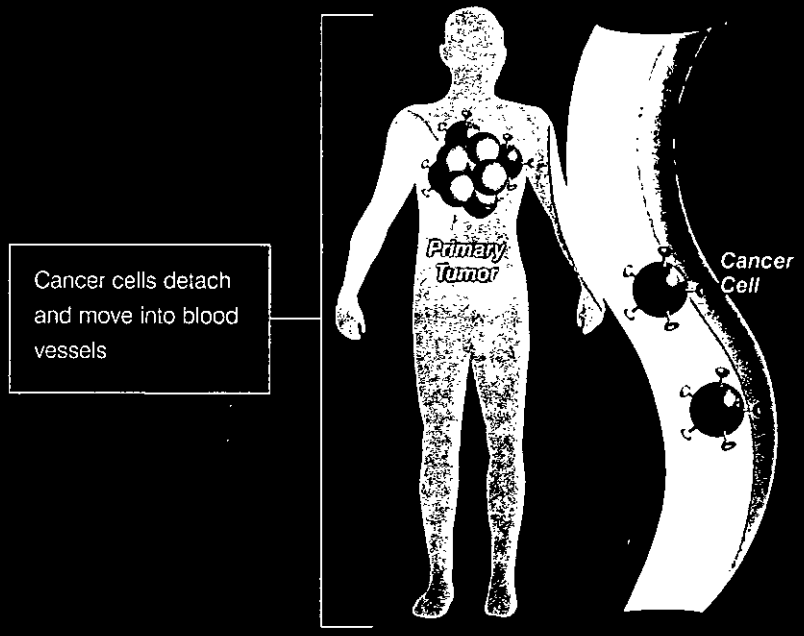
③ **CTCE-9908**
Blocks SDF-1 binding to CXCR4, preventing the formation of metastastic tumours

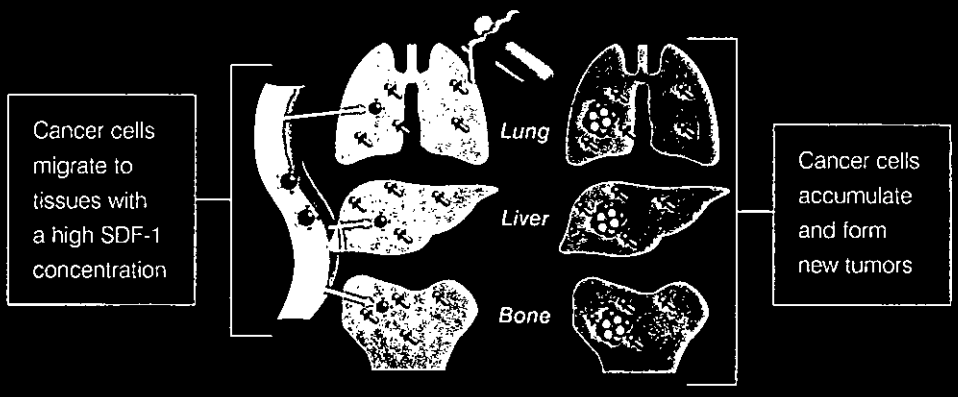


① **CXCR4**
is expressed in over 30 different types of cancer

Cancer Follows Signals Important For Metastasis

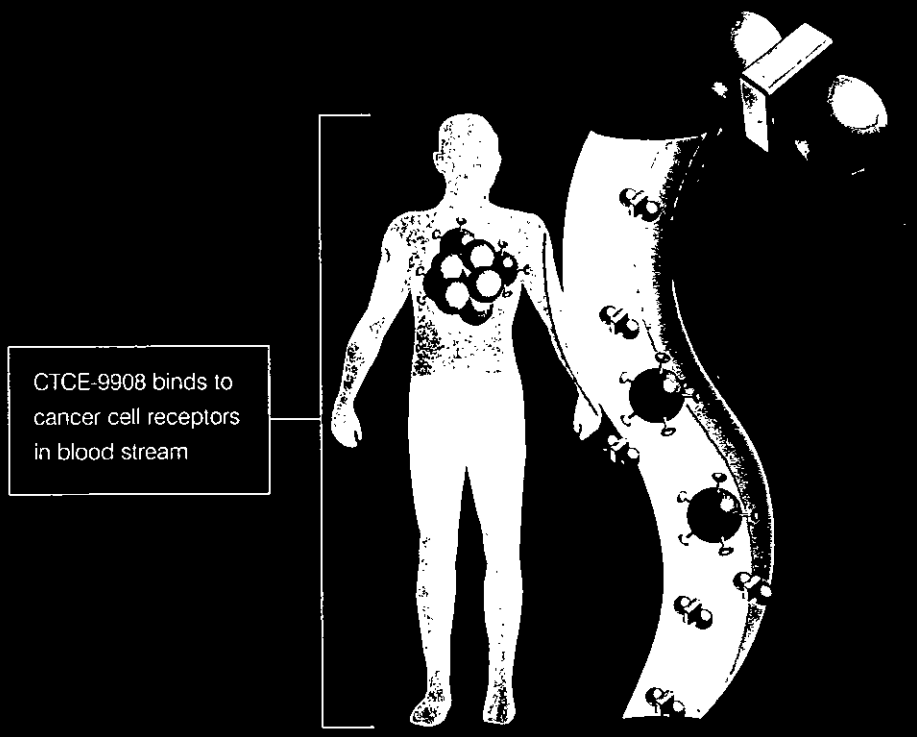
CXCR4 receptors are known to be expressed on the cell surface of more than 30 types of cancers. As cancer cells detach from the primary tumor and begin circulating in the blood, they migrate to organs that produce high levels of the chemokine SDF-1. SDF-1 binds to CXCR4 receptors. The binding and activation of CXCR4 by SDF-1 induces the migration of cancer cells into normal, healthy tissue. SDF-1 is also implicated in the generation of blood vessels that feed the cancer and propagate its metastatic growth.

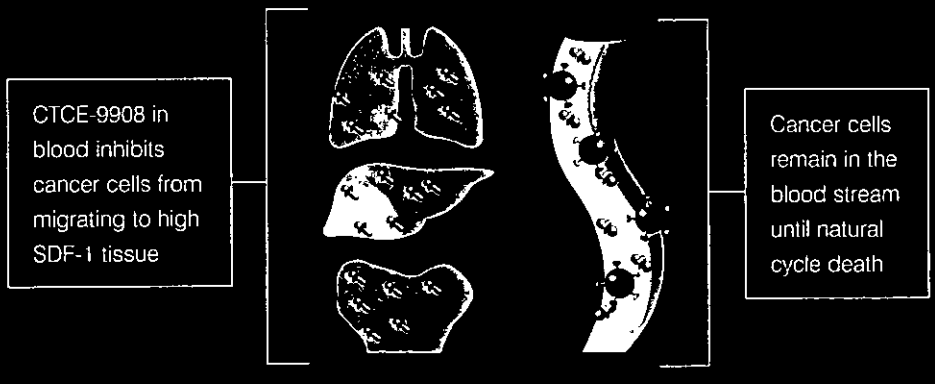




CTCE-9908 Blocks CXCR4 Receptor

Our drug, CTCE-9908, is a CXCR4 antagonist. It blocks the chemokine SDF-1 from binding and activating CXCR4 receptors. By blocking this process, the migration and infiltration of cancer cells into other normal tissues is reduced. As a result, the spread of cancer cells throughout the body is mitigated.





CTCE-0214

Stem cells, white blood cells and platelets all play a critical role in the body, from fighting infection to blood clotting. Our second lead product candidate, CTCE-0214, has demonstrated the ability to increase levels of all three of these key blood cell populations. As a result, it has the potential to boost the immune system and could play a critical role in restoring a cancer patient's immunity and blood cells between chemotherapy cycles.

Why we are excited

In clinical trials, CTCE-0214 increased total white blood cell counts. It also showed low toxicity. In addition, our preclinical studies results have shown that this drug candidate may increase the benefits of Neupogen®, the main drug currently in use for immune system recovery.

Future

Our main priority over the next two years will be to focus both financial and human resources on the development of CTCE-9908. We will also continue to pursue further development of CTCE-0214 in collaboration with strategic partners. We have determined that for business and strategic reasons we will be better able to pursue the potential of this chemokine through further research being undertaken in conjunction with either a partner or through a licensing arrangement. We continue to seek suitable collaborators for such arrangements.

CTCE-0324

Our vascular product, CTCE-0324, is targeted at peripheral arterial disease, a debilitating condition caused by obesity, diabetes, atherosclerosis and aging. Approximately 10 million Americans suffer from peripheral arterial disease.

Why we are excited

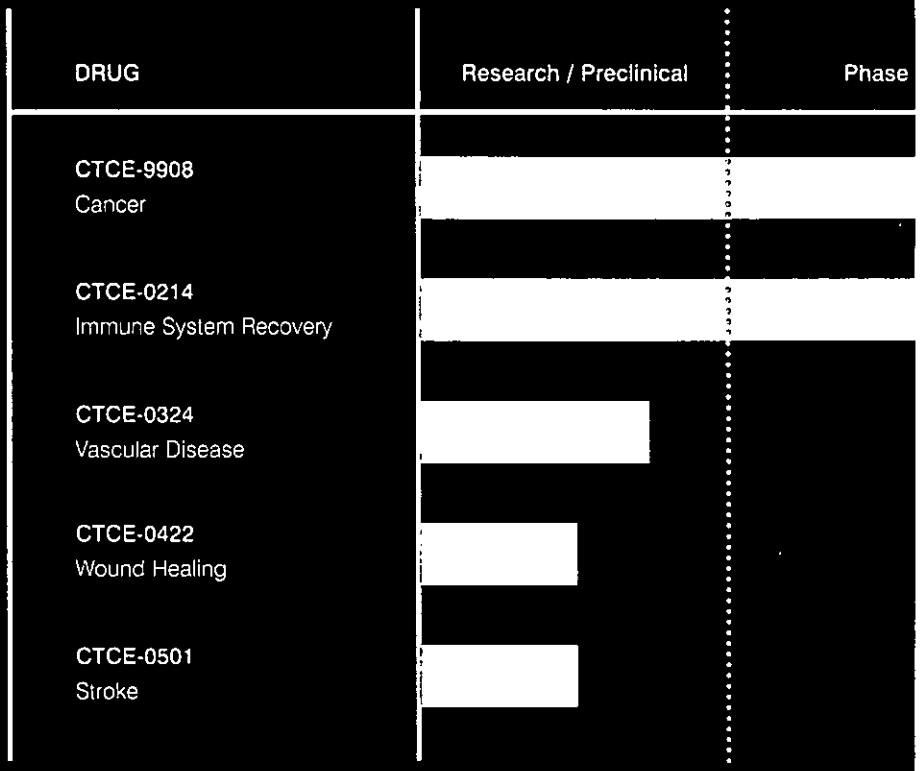
CTCE-0324 is a synthetic chemokine that has the potential to increase vascularization of peripheral tissues through the creation of new pathways for blood supply. By increasing the formation of new blood vessels, known as angiogenesis or neovascularization, CTCE-0324 has the potential to play a critical therapeutic role in the process of increasing blood supply to the areas of the body where vessels are narrowed or have become blocked.

Future

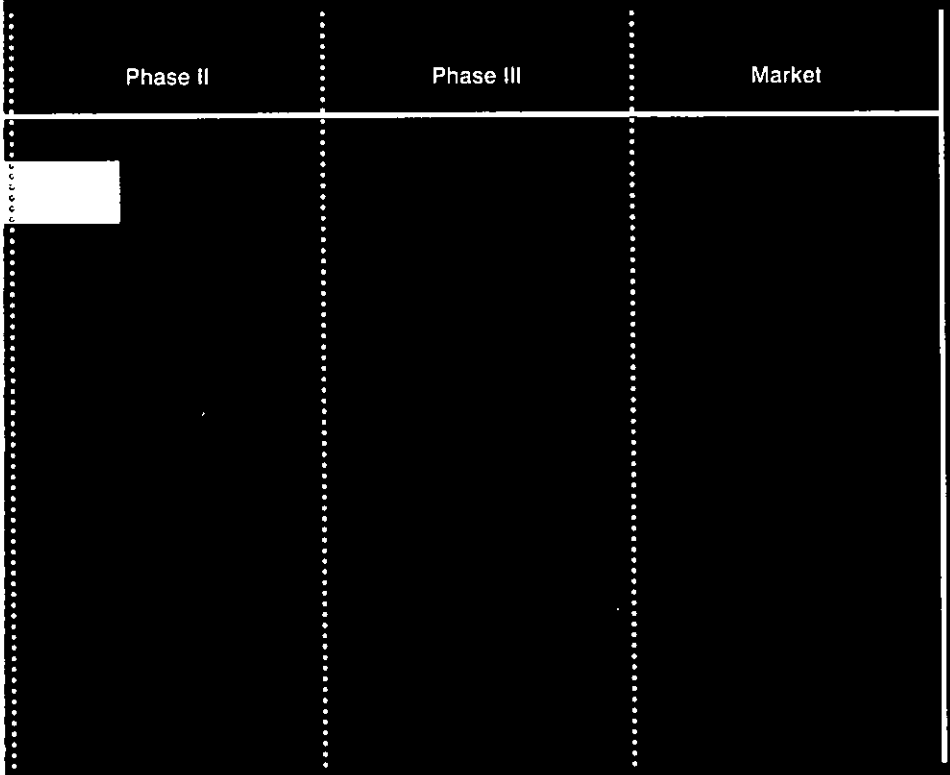
CTCE-0324 is currently in the research and preclinical testing phase. We intend to carry out further preclinical testing of the compound to determine the potential of this agent for peripheral arterial disease.

Product Pipeline

In addition to Chemokine's two lead product candidates, our rational-drug design platform of synthetic chemokines ensures that we have an ongoing ability to identify new drug candidates. The clinical potential of synthetic chemokines spans many unmet medical needs including cancer, immune deficiencies, vascular disease, and infectious disease. In addition to our lead drugs, we will continue to advance our vascular product, CTCE-0324.



Chemokine's objective is to discover drug candidates that target chemokine receptors and develop them through Phase II clinical trials. Once we reach this stage of development or earlier, we anticipate entering into licensing or co-development agreements with larger biotechnology and pharmaceutical companies to enable further drug candidate development through Phase III clinical trials.



Recent biotech-pharma deals involving chemokine-based technologies demonstrate the growing interest in developing this class of drugs to address unmet medical needs. Examples of such deals include the acquisition of Tularik by Amgen for US$1.3 billion, AnorMED by Genzyme, Pfizer's deal with Incyte Genomics and ChemoCentryx's deal with GlaxoSmithKline. At Chemokine, we believe we are well positioned to develop a partnership with a major pharmaceutical company upon successful completion of Phase II clinical trials.

Letter to Shareholders

2006 was both a year of accomplishment and change. My appointment to CEO in March 2007 represents a significant transition for Chemokine Therapeutics. My primary goal as CEO will be to provide leadership while implementing strategies that will meet our ultimate objective of advancing our product pipeline and enhancing shareholder value.

While 2006 was a busy and exciting year for the company, one achievement stands apart from the rest; we significantly advanced the development of our lead anti-cancer compound, CTCE-9908. By continuing to move this compound through the regulatory process, we strengthened our foundation and laid the groundwork for future success. As a result, we are one step closer to our ultimate goal of proving the efficacy and safety of our chemokine drug candidates.

In early 2006, the company received Health Canada approval to initiate a Phase I/II dose-escalating clinical trial in cancer patients using CTCE-9908. By May, the company had started enrollment of 30 late-stage cancer patients and began patient dosing. The primary endpoints for this open label, dose-escalating trial are safety and preliminary efficacy measured by comparing the size of target tumors at baseline to the assessment performed after CTCE-9908 treatment. The trial was designed to study a mixed group of tumors, including common cancers, like ovarian, lung and breast.

Subsequent to year end, we announced encouraging preliminary results from the dose-escalation portion of this study. Data showed that CTCE-9908 had an acceptable safety profile. In addition, two out of three ovarian cancer patients exhibited stable disease when comparing the size of ovarian tumors at baseline to the assessment performed after CTCE-9908 treatment.

This promising early data underpins our belief that CTCE-9908 has the potential to become part of a new generation of anti-cancer drugs that act to inhibit the metastasis associated with most cancers. We believe that this can be accomplished by preventing the spread of cancer cells from the original tumor to other tissues in the body.

Collaborations with prestigious institutions including the Memorial Sloan-Kettering Cancer Center and the M.D. Anderson Cancer Center to study the benefits of CTCE-9908 in breast and other cancers reinforce our belief in the potential of this compound.

We are now looking to rapidly expand the number of patients in Phase II clinical trials of CTCE-9908 to examine the potential broader applicability of this novel oncology drug in the treatment of cancer patients.

Of course, results from the ongoing trial this year may also enhance our potential for partnering opportunities. A strategic relationship with a partner that possesses both the resources and expertise required to advance CTCE-9908 into late-stage clinical testing, and eventually commercialization, could greatly increase shareholder value.

2006 was also significant for our second lead drug candidate, CTCE-0214. In December, the company announced the completion of the first two stages of a three-part Phase I clinical trial for this compound. In this trial, 57 healthy volunteers were evaluated using various doses where intravenous and subcutaneous routes of administration were compared. The study demonstrated CTCE-0214 to be safe and well tolerated when administered intravenously as a single dose. Multiple doses administered on a

daily basis for five consecutive days also proved to be well tolerated. No serious adverse events were reported. Consistent with previous studies, administration of CTCE-0214 subcutaneously resulted in a 300% increase in neutrophil counts that peaked at approximately 12 hours and were sustained above the baseline value for approximately 48 hours after each administration. These results demonstrated the potential of CTCE-0214 to restore a cancer patient's immune system and blood cells between cycles of chemotherapy.

While our main priority remains advancing our two lead programs in clinical trials, we understand the importance of continuing to build out our product pipeline. Our vascular product, CTCE-0324, promotes the formation of new blood vessels and has the potential to increase vascularization of peripheral tissues through the creation of new pathways for blood supply. We are currently working on preclinical studies with this compound and look forward to seeing further results from this promising drug candidate. These initiatives continue to form the basis for long-term growth.

Given the breadth of our clinical development, the company took steps to strengthen its balance sheet over the course of the year. The US$7.5 million of new capital raised in 2006 gives us the financial flexibility to support ongoing development. In addition, the removal of the preferred shares from our balance sheet improves the capital structure for our common shareholders.

Intellectual property is critical to our ability to develop new compounds unfettered. As such, we took steps to strengthen our intellectual property in 2006 with a U.S. patent grant. This grant reinforces our overriding strategy to broaden the proprietary scope of our drug development platform while helping to further solidify our intellectual property position.

We also took steps to reinforce our management team. We appointed Dr. Guy Ely to Chief Medical Officer. With over 20 years in the pharmaceutical industry and experience supervising over 150 clinical trials, Dr. Ely will prove to be invaluable as he oversees the Company's clinical development programs. Also during the year, Mr. Bashir Jaffer was appointed to serve as the Company's new Chief Financial Officer. Mr. Jaffer's diverse experience makes him ideal for overseeing the financial and accounting affairs of Chemokine.

Dr. Mohammad Azab, former Executive Vice-President of Research and Development and Chief Medical Officer of QLT joined our Board of Directors. In addition, Dr. Gerald Batist, the Director of the McGill Centre for Translational Research in Cancer joined our Clinical Advisory Board. Dr. Batist's experience and breadth of knowledge related to the clinical development of compounds is expected to significantly strengthen the Company's Clinical Advisory Board, which is critical in guiding Chemokine's clinical development programs.

In summary, I would like to extend my sincere thanks to those that have supported our endeavors: our employees, our Board of Directors, and of course, our shareholders. I look forward to updating you on our progress in the quarter ahead.

Sincerely yours,

C. Richard Piazza
Chairman & CEO

Corporate Information

BOARD OF DIRECTORS

C. Richard Piazza, MA
Chairman & CEO

Hassan Salari, Ph.D
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Consultant to Healthcare Industry

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Principal, Desert Trail Consulting, LLC

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Bin Haung, Ph.D, MBA
Director of Intellectual Property and Business Development

Don Evans
Director of Public Relations

(1) Member of the Audit Committee
(2) Member of the Compensation Committee
(3) Member of the Nominating and Corporate Governance Committee

CORPORATE OFFICES

Suite 405, 6190 Agronomy Road
Vancouver, BC
V6T 1Z3 Canada
Telephone: (604) 822-0301
Fax: (604) 822-0302

2314 Ralph Street, #12
Houston, TX
77006 USA
Telephone: (713) 630-0782
Fax: (713) 520-0641
Website: www.chemokine.net

AUDITORS

M.D. Sassi Company
Suite 2200, 425 Market Street
San Francisco, CA
94105 USA

LEGAL COUNSEL

(United States)
K & L Gates
Suite 2900, 925 Fourth Avenue
Seattle, WA
98104-7580 USA

LEGAL COUNSEL

(Canada)
McCarthy Tétrault LLP
Suite 1300, 777 Dunsmuir Street
P.O. Box 10424 Pacific Centre
Vancouver, BC
V6C 2T6 Canada

TRANSFER AGENT & REGISTRAR

Pacific Corporate Trust Company
510 Burrard Street, 3rd Floor
Vancouver, BC
V6C 3B9 Canada
Telephone: (604) 689-9853

STOCK EXCHANGE LISTING

TSX under the symbol CTI

OTCBB under the symbol CHKT

INVESTOR RELATIONS

Don Evans
Telephone: (604) 822-0305
Toll Free: (888) 822-0305

Email: devans@chemokine.net

Designed and produced by: The Equicom Group Inc

CORPORATE OFFICES
Suite 405, 6190 Agronomy Road
Vancouver, BC
V6T 1Z3 Canada
Phone: (604) 822–0301
Fax: (604) 822–0302

2314 Ralph Street, #12
Houston, TX
77006 USA
Phone: (713) 630–0782
Fax: (713) 520–0641

www.chemokine.net

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